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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/804,199

Applicant(s)

MASHITANI ET AL.

Examiner

JEFFREY D. POPHAM

Art Unit

2437

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 March 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-7, 10-19, 26 and 27 is/are pending in the application.
- 4a) Of the above claim(s) 26 and 27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-7 and 10-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Remarks

Claims 3-7 and 10-19 are pending.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114.

Applicant's submission filed on 2/4/2009 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 4 and 11, filed 2/4/2009 have been fully considered but they are not persuasive.

Applicant argues that Buxton does not describe a process for reproducing content as a three-dimensional stereoscopic image, but rather described reproducing masked content as normal three-dimensional image or two-dimensional image. First noted is that the rejection of claims 4 and 11 is based on a combination of references under 35 USC 103. One will clearly see that the primary reference, Swift, teaches a process for reproducing three-dimensional stereoscopic images. As Applicant notes, Buxton is directed to masking content, which can come in various forms, such as three-dimensional images, two-dimensional images, sounds, etc. As one of ordinary skill in the art will readily

realize, a 3D stereoscopic image is reproduced from multiple 2D images. One will also see this throughout Swift, such as in figure 11, showing the left image and right image, each being a 2D image that, when used together, create a 3D stereoscopic image. Therefore, the masking of 2D images of Buxton clearly correlates to masking of the 2D portions of the stereoscopic image of Swift. Indeed, Applicant goes on to note that "The combination of Buxton and Swift, at best, suggests applying the mask taught by Buxton to the stereoscopic image taught by Swift." Applicant goes on to argue that the mask is not stereoscopic multiple image data which correspond respectively to multiple viewpoints, and therefore does not produce a new stereoscopic image in such a manner that another 3D stereoscopic image appears in front of the range where an original 3D stereoscopic image can be observed. However, Buxton is fully concerned with providing masks that appear in front of a range where original image data can be observed. As discussed in the interview, Buxton teaches masking via placing masks over data of an image (such as by putting clothing on a naked person). This mask clearly appears in front of a range where original image data can be observed, since there is now clothing that obstructs viewing of the person's naked body. When viewing the combination, one will clearly see that both (or all) viewpoints of the stereoscopic image taught in Swift will be obscured using the techniques of Buxton in order to mask the content provided in each (putting clothing on a naked person in one view, but not the other, would render the masking useless, much like only putting clothing on a naked person in a single frame of a video sequence, leaving the person naked in the other frames).

Furthermore, Buxton clearly teaches masking of 3D content, though not necessarily referring to stereoscopic content, it has been described above that stereoscopic content is merely a set of 2D images. Applying a mask to 3D content of Buxton works in the same way, such that the mask will appear in front of the range where the original image content can be observed.

Applicant's arguments with respect to claims 3, 5-7, 10, and 12-19 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 3, 5-7, and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 first recites "determining whether a three-dimensional stereoscopic image content can be reproduced as a three-dimensional stereoscopic image" and later recites "reproducing the content with a restriction when it is determined that the entire content cannot be reproduced as three-dimensional stereoscopic image". The claim still later recites "the process for reproducing the content with a restriction is a process for reproducing a part of the content as a three-dimensional stereoscopic image". The first of the limitations discussed here refers to determining if an image can be reproduced stereoscopically, and the last of the limitations refers to reproducing the image

stereoscopically even when it is determined that it cannot be. The middle limitation appears to attempt to glue these limitations together by adding "entire" before content, however, the determining step has already determined if the content can be reproduced as a 3D stereoscopic image or not. The claimed determining step determines whether an image can be reproduced as a 3D stereoscopic image. There are only two results from this determination: yes, the image can be reproduced as a 3D stereoscopic image and no, the image cannot be reproduced as a 3D stereoscopic image. Stating that an image that cannot be reproduced as a 3D stereoscopic image is reproduced as a 3D stereoscopic image is contradictory. As an analogy, if determining whether data can be reproduced as video results in a response that the data cannot be reproduced as video, then the data cannot be reproduced as video. It appears as though Applicant wishes to first check whether a particular device is suited for reproducing the content stereoscopically and/or the device has a particular key for decrypting the data in the determining step. As opposed to providing "entire" before content in the switching step, this idea must be moved up to the determining step in order to make it clear. For example, the determining step may read "determining whether a three-dimensional stereoscopic image content can be reproduced in its entirety as a three-dimensional stereoscopic image" for part of the solution. This still does not tie the determining to the device and/or key, however, but would make it clear that the determining step is looking to determine whether the content can be reproduced in its entirety, thereby leaving the option of reproducing the content stereoscopically when the content cannot

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be reproduced in its entirety. Claims 5-7 do not fix this issue, as merely introducing a key used to encode/decode the content does not introduce sufficient clarity for the determining step of claim 3. Claim 10 has the same issue.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3, 5, 6, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Swift (U.S. Patent Application Publication 2002/0122585) in view of Redert (U.S. Patent 7,439,976) and Yu (U.S. Patent Application Publication 2004/0028227).

Regarding Claim 3,

Swift discloses a 3D image displaying method comprising:

Determining whether a 3D stereoscopic image can be reproduced as a 3D stereoscopic image (Paragraphs 45-46);

Reproducing the image content as a 3D stereoscopic image when it is determined that the image content can be reproduced as a 3D stereoscopic image (Paragraphs 41-46; displaying the media in a stereoscopic mode when selected and compatible);

Switching to a process for reproducing the image content with a restriction when it is determined that the entire content cannot be reproduced as a 3D stereoscopic image (Paragraphs 45-46; using a different mode, such as monoscopic);

Wherein when the 3D stereoscopic image content contains multiple image data which correspond respectively to multiple viewpoints and the multiple image data includes unencrypted image data which include at least two viewpoints, the process for reproducing the content with a restriction is a process for reproducing a part of the content using the unencrypted image data (Paragraphs 44-46);

But does not explicitly disclose encrypted image data including one or more different viewpoints or that reproducing with a restriction reproduces the content as a 3D stereoscopic image using at least two viewpoints.

Redert, however, discloses 3D stereoscopic image data comprising a base layer (normal monoscopic image) and one or more sublayers, each including a viewpoint or range of viewpoints, wherein the image data can be reproduced as a monoscopic image, stereoscopic, or multiview image using the layers of image data; and reproducing the content with a restriction by reproducing a part of the content as a 3D stereoscopic image using unencrypted image data which includes at least two viewpoints (Figure 1;

Column 3, line 60 to Column 4, line 12; and Column 5, lines 4-38; showing the normal image of figure 1 being used as the monoscopic image and additional sublayers containing viewpoints (or ranges of viewpoints) being used to display stereoscopic and multiview images. The restriction being when many viewpoints are included and a stereoscopic image is displayed by using 2 viewpoints). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the image layering techniques of Redert into the stereoscopic media delivery system of Swift in order to allow the system separate and easily distinguish between multiple layers, allowing receivers to select the content to be viewed in a simple manner, and/or provide for many additional viewpoints to be added to the data set, such that higher quality stereoscopic and multiview display may be obtained.

Yu, however, discloses image content comprising unencrypted image data and encrypted image data, such unencrypted and encrypted image data corresponding to layers (the layers of the combination each including at least one viewpoint, as described in Redert), such that the unencrypted layers can be used for display with a restriction, and the encrypted layers (viewpoints) can be used for display with a restriction and/or full display of the entire image data (Figure 4; Paragraphs 46-49 and 52-53; showing N layers, each of which may or may not be

encrypted, and each that is encrypted may be encrypted using the same or different algorithms and/or keys). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the partial encryption system of Yu into the stereoscopic media delivery system of Swift as modified by Redert in order to protect content from unauthorized access via encryption, requiring authorization for the particular key used to decrypt the content, while allowing all entities to view a particular layer(s) of the content as a low quality version, thereby allowing entities to preview the content in order to decide whether to pay (or otherwise obtain the key) for decrypting the full content.

Regarding Claim 10,

Claim 10 is a computer readable storage medium claim that is broader than method claim 3 and is rejected for the same reasons.

Regarding Claim 5,

Swift as modified by Redert and Yu discloses the method of claim 3, in addition, Redert discloses reproducing the content as a 3D stereoscopic image (Figure 1; Column 3, line 60 to Column 4, line 12; and Column 5, lines 4-38); and Yu discloses obtaining a key for reproducing the content when it is determined that the content cannot be reproduced as a 3D stereoscopic image (Paragraphs 46-49 and 52-53; obtaining a key for reproducing

encrypted layers, wherein such encrypted layers are used in reproducing the 3D stereoscopic image of the combination, as described above).

Regarding Claim 6,

Swift as modified by Redert and Yu discloses the method of claim 5, in addition, Yu discloses that the content is encoded by the key, and further comprising decoding the content by using the key in reproducing the content (Paragraphs 46-49 and 52-53).

5. Claims 4 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Swift in view of Buxton (U.S. Patent 6,937,730).

Regarding Claim 4,

Swift discloses a 3D image display method comprising:

Determining whether a 3D stereoscopic image content can be reproduced as a 3D stereoscopic image (Paragraphs 45-46);

Reproducing the content as a 3D stereoscopic image when it is determined that the content can be reproduced as a 3D stereoscopic image (Paragraphs 41-46);

Switching to a process for reproducing the content with a restriction when it is determined that the content cannot be reproduced as a 3D stereoscopic image (Paragraphs 41-46);

Wherein when the 3D stereoscopic image content contains original multiple image data which correspond respectively to

multiple viewpoints and other multiple image data which correspond respectively to the multiple viewpoints (Paragraphs 36-46);

But does not explicitly disclose that the process for reproducing the content with a restriction is a process for adding the respective other image data to the respective original image data for the respective viewpoints so as to generate new multiple image data which correspond respectively to the multiple viewpoints and reproducing the content as a 3D stereoscopic image using the generated new multiple image data in such a manner that another 3D stereoscopic image appears in front of the range where an original 3D stereoscopic image can be observed.

Buxton, however, discloses that 3D image content contains original multiple image data which correspond respectively to multiple viewpoints and other multiple image data which correspond respectively to the multiple viewpoints, the process for reproducing the content with a restriction is a process for adding the respective other image data to the respective original image data for the respective viewpoints so as to generate new multiple image data which correspond respectively to the multiple viewpoints and reproducing the content as a 3D image using the generated new multiple image data in such a manner that another 3D image appears in front of the range where an original 3D image can be observed (Abstract; Figure 3; Column 3, line 51 to Column 4, line

18; Column 4, line 56 to Column 5, line 16; Column 7, lines 10-26; and Column 8, lines 4-22). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the content-specific conditional access system of Buxton into the stereoscopic media delivery system of Swift in order to allow the system to obfuscate content in such a way that only authorized entities may view the complete content, while allowing multiple levels of access, such that untrusted entities may be able to view a certain version while trusted entities can view other versions related to ratings (e.g. NC-17, R, and PG-13) and user preferences, thereby hiding objectionable and/or sensitive data from entities that should not be allowed to view such.

Regarding Claim 11,

Claim 11 is a computer readable storage medium claim that is broader than method claim 4 and is rejected for the same reasons.

6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Swift in view of Redert and Yu, further in view of Glover (U.S. Patent 6,185,686).

Swift as modified by Redert and Yu discloses the method of claim 5, in addition, Swift discloses reproducing the content as a 3D stereoscopic image (Paragraphs 41-46); but does not explicitly disclose that a program for reproducing the content is encoded by the key, and

further comprising decoding the program by using the key in reproducing the content.

Glover, however, discloses that a program for reproducing content is encoded by a key, and further comprising decoding the program by using the key in reproducing the content (Column 8, line 51 to Column 9, line 54; Column 11, lines 38-65; and Column 21, line 61 to Column 22, line 8). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the self-decrypting product of Glover into the stereoscopic media delivery system of Swift as modified by Redert and Yu in order to allow the system to protect the program used to reproduce the content, such that only authorized parties may obtain access to such a program via passwords, authorization codes, encryption keys, and the like in addition to the content itself being encrypted, thereby providing an additional layer of security to the system.

7. Claims 12-14 rejected under 35 U.S.C. 103(a) as being unpatentable over Swift in view of Redert and Yu, further in view of White (U.S. Patent Application Publication 2003/0009669).

Regarding Claim 12,

Swift as modified by Redert and Yu discloses the storage medium of claim 10, in addition, Swift discloses reproducing the content as a 3D stereoscopic image (Paragraphs 41-46) and Yu discloses obtaining a key for reproducing the content (Paragraphs

46-49 and 52-53); but does not explicitly disclose that the key is obtained by accessing a server which offers the content.

White, however, discloses obtaining a key for reproducing content by accessing a server which offers the content (Paragraphs 37-42). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the uniquely client-associated content of White into the stereoscopic media delivery system of Swift as modified by Redert and Yu in order to allow the system to broadcast content to many devices, while maintaining explicit knowledge of which particular client has decrypted the content, thereby providing a way to identify users and/or devices that illegally (or legally) use and/or distribute content.

Regarding Claim 13,

Swift as modified by Redert, Yu, and White discloses the storage medium of claim 12, in addition, White discloses that obtaining the key is performed when it is determined that the content cannot be reproduced (Paragraphs 37-42).

Regarding Claim 14,

Swift as modified by Redert, Yu, and White discloses the storage medium of claim 12, in addition, Yu discloses that the content is encoded by the key, and reproducing the content

includes decoding the content by using the key (Paragraphs 46-49 and 52-53).

8. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Swift in view of Redert, Yu, and White, further in view of Glover.

Swift as modified by Redert, Yu, and White does not explicitly disclose that a program module for reproducing the content is encoded by the key, and switching the reproduction process includes decoding the program module by using the key.

Glover, however, discloses that a program module for reproducing the content is encoded by the key, and switching the reproduction process includes decoding the program module by using the key (Column 8, line 51 to Column 9, line 54; Column 11, lines 38-65; and Column 21, line 61 to Column 22, line 8). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the self-decrypting product of Glover into the stereoscopic media delivery system of Swift as modified by Redert and Yu in order to allow the system to protect the program used to reproduce the content, such that only authorized parties may obtain access to such a program via passwords, authorization codes, encryption keys, and the like in addition to the content itself being encrypted, thereby providing an additional layer of security to the system.

9. Claims 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Swift in view of Redert, Yu, and White, further in view of Cookson (U.S. Patent 6,771,888).

Regarding Claim 16,

Swift as modified by Redert, Yu, and White does not explicitly disclose an encoded identification code, wherein it is determined whether the content can be reproduced by decoding the encoded identification code using the key.

Cookson, however, discloses an encoded identification code, wherein it is determined whether the content can be reproduced by decoding the encoded identification code using the key (Column 19, line 18 to Column 20, line 20, and Column 27, line 51 to Column 28, line 30; generating an authorization code, decrypting an encrypted authorization code, and comparing them). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the authorization system of Cookson into the stereoscopic media delivery system of Swift as modified by Redert, Yu, and White in order to allow a piece of content to be authorized for use with particular standards, aspect ratios, and the like, but not others, thereby enabling fine-grained access control over which devices and users can access and view the content, in a way that is cryptographically secured, such that illegal content creation and use may be determined easily.

Regarding Claim 17,

Swift as modified by Redert, Yu, White, and Cookson discloses the storage medium of claim 16, in addition, Cookson discloses an unencoded identification code as well as the encoded identification code, wherein it is determined whether the content can be reproduced by decoding the encoded identification code using the key and comparing the decoded identification code with the unencoded identification code (Column 19, line 18 to Column 20, line 20, and Column 27, line 51 to Column 28, line 30).

Regarding Claim 18,

Swift as modified by Redert, Yu, and White does not explicitly disclose obtaining an encoded identification code from an image filter for viewing the content stereoscopically, wherein it is determined whether the content can be reproduced by decoding the encoded identification code using the key.

Cookson, however, discloses obtaining an encoded identification code from an image filter for viewing the content stereoscopically, wherein it is determined whether the content can be reproduced by decoding the encoded identification code using the key (Column 19, line 18 to Column 20, line 20, and Column 27, line 51 to Column 28, line 30). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the authorization system of Cookson into the

stereoscopic media delivery system of Swift as modified by Redert, Yu, and White in order to allow a piece of content to be authorized for use with particular standards, aspect ratios, and the like, but not others, thereby enabling fine-grained access control over which devices and users can access and view the content, in a way that is cryptographically secured, such that illegal content creation and use may be determined easily.

Regarding Claim 19,

Swift as modified by Redert, Yu, White, and Cookson discloses the storage medium of claim 18, in addition, Cookson discloses obtaining an unencoded identification code as well as the encoded identification code, wherein it is determined whether the content can be reproduced by decoding the encoded identification code using the key and comparing the decoded identification code with the unencoded identification code (Column 19, line 18 to Column 20, line 20, and Column 27, line 51 to Column 28, line 30).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY D. POPHAM whose telephone number is (571)272-7215. The examiner can normally be reached on M-F 9:00-5:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emmanuel Moise can be reached on (571)272-3865. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jeffrey D Popham
Examiner
Art Unit 2437

/Jeffrey D Popham/
Examiner, Art Unit 2437